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Micro Commercial Components ™

Micro Commercial Components
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2SA1013-R
2SA1013-O
2SA1013-Y

**PNP
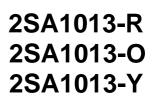Epitaxial Silicon
Transistor**

Features

- Lead Free Finish/Rohs Compliant ("P"Suffix designates RoHS Compliant. See ordering information)
- Capable of 0.9Watts of Power Dissipation.
- Collector-current -1.0A
- Collector-base Voltage -160V
- Operating and storage junction temperature range: -55℃ to +150℃
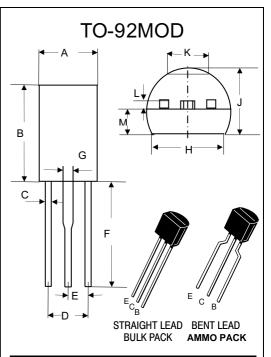- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Halogen free available upon request by adding suffix "-HF"

Electrical Characteristics @ 25⁰C Unless Otherwise Specified

Symbol	Parameter	Min	Max	Units
OFF CHARACTERISTICS				
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage (I_C=-1.0mAdc, I_B=0)	-160	---	Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage (I_C=-100uAdc, I_E=0)	-160	---	Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage (I_E=-10mAdc, I_C=0)	-6.0	---	Vdc
I_{CBO}	Collector Cutoff Current (V_{CB}=-150Vdc, I_E=0)	---	-1.0	uAdc
I_{CEO}	Collector Cutoff Current (V_{CB}=-120Vdc, I_E=0)	---	-10	uAdc
I_{EBO}	Emitter Cutoff Current (V_{EB}=-6.0Vdc, I_C=0)	---	-1.0	uAdc
ON CHARACTERISTICS				
$h_{FE(1)}$	DC Current Gain (I_C=-200mAdc, V_{CE}=-5.0Vdc)	65	310	---
$h_{FE(2)}$	DC Current Gain (I_C=-50mAdc, V_{CE}=-5.0Vdc)	40	---	---
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage (I_C=-500mAdc, I_B=-50mAdc)	---	-1.5	Vdc
V_{BE}	Base-Emitter Saturation Voltage (I_C=-5.0mAdc, V_{CE}=-5.0Vdc)	---	-0.75	Vdc
SMALL-SIGNAL CHARACTERISTICS				
f_T	Transistor Frequency (I_C=-200mAdc, V_{CE}=-5.0Vdc, f=30MHz)	-15	---	MHz

CLASSIFICATION OF H FE (1)

Rank	R	O	Y
Range	60-120	120-200	200-300

TO-92MOD

STRAIGHT LEAD
BULK PACK

BENT LEAD
AMMO PACK

DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.228	.244	5.80	6.20	
B	.331	.346	8.40	8.80	
C	.016	.024	0.40	0.60	
D	.114	.122	2.90	3.10	Straight Lead
	.173	.220	4.40	5.60	Bent Lead
E	.059		1.50		Straight Lead
	.086	.110	2.20	2.80	Bent Lead
F	.543	.559	13.80	14.20	
G	.035	.043	0.90	1.10	
H	.157	-----	4.00	---	
J	.185	.201	4.70	5.10	
K	----	.063	-----	1.60	
L	.016	.020	0.40	0.50	
M	.068	.080	1.73	2.03	

* For ammo packing detailed specification, click here to visit our website of product packaging for details.

www.mccsemi.com

Revision: C

2013/01/01

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Ordering Information :

Device	Packing
Part Number-AP	Ammo Packing: 20Kpcs/Carton
Part Number-BP	Bulk: 50Kpcs/Carton

Note : Adding "-HF" suffix for halogen free, eg. Part Number-BP-HF

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